

# Prakash Mulchandani President, Heavy Vehicle Systems Meritor Automotive Incorporated



#### **Commercial Market Drivers**

- Reduce/Eliminate Maintenance
- Driver Retention and Comfort
  - Ease Of Operation
- Shorter/Safer Stopping Distances
- Improved Fuel Economy and Emissions Performance

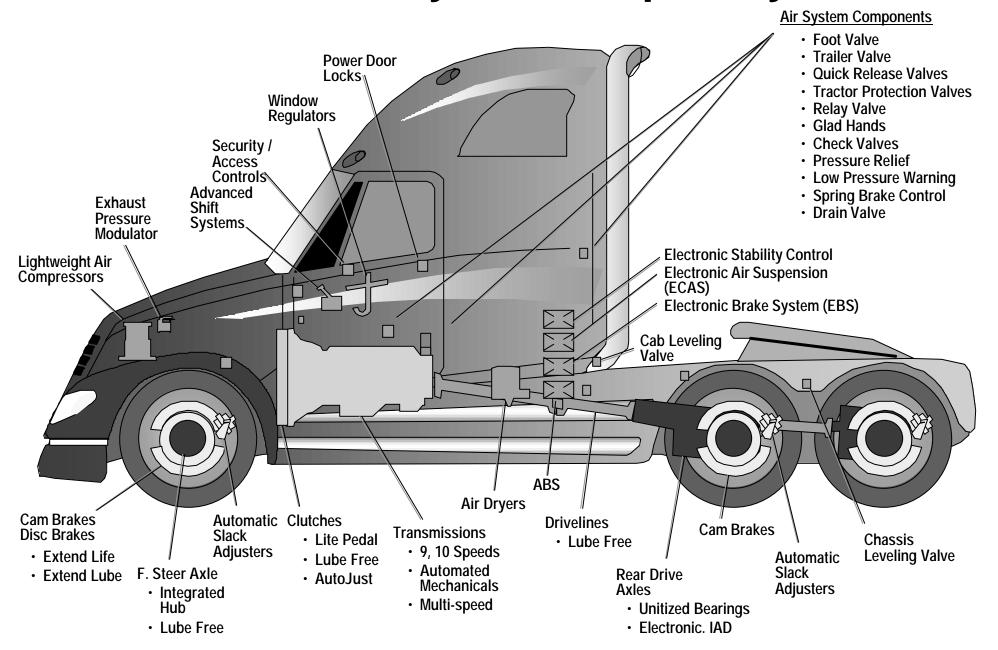


# **Military Market Drivers**

- Same As Commercial Market Plus...
  - Mobility
  - Handling And Stability
  - Durability And Robustness
  - Stealth Capability

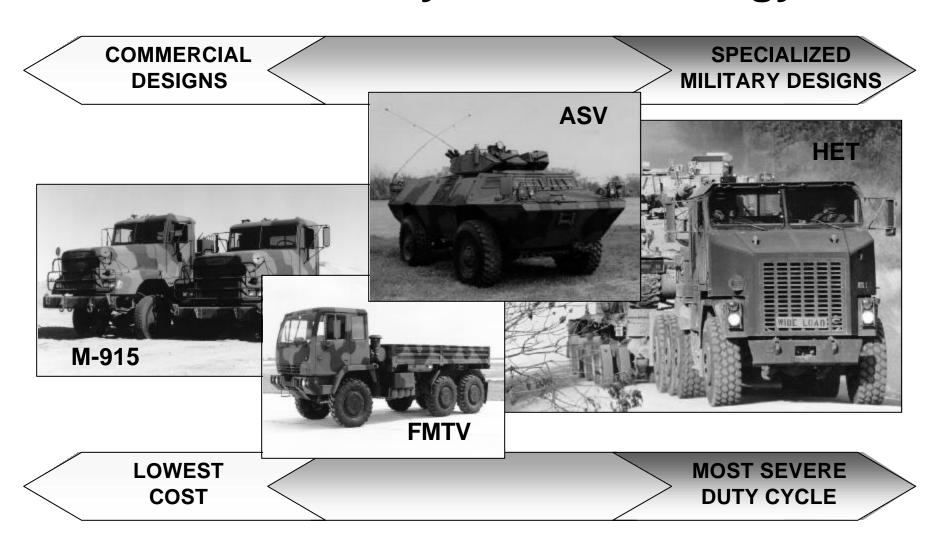


### **Vehicle Systems Capability**





# **Meritor Military Product Strategy**



**Optimize The Cost Durability Tradeoff** 



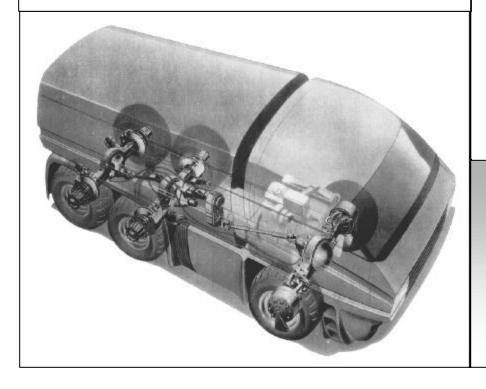
# Pertinent Commercial Technology Applicable To Military Design

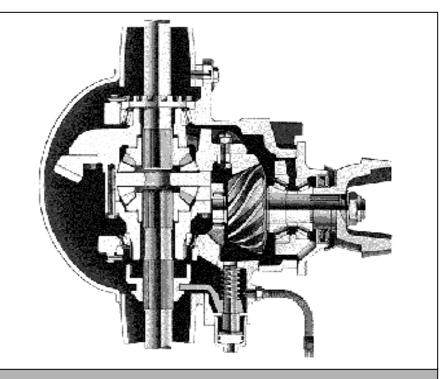


#### **Automatic Traction Control**

**Automatically Senses Wheel Slippage** 

**Automatically Locks Differential** 





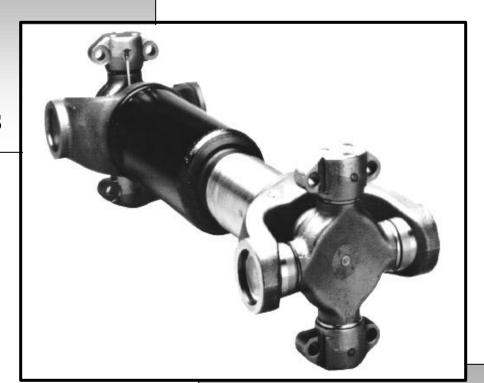
Delivers Maximum
Torque To Wheel End

Returns Vehicle To Tractive State



# **Permanently Lubricated Drivelines**

- Lubricated For Life////
- High Strength
- Lightweight
- ◆ Triple Lip Seals



- Reduced Maintenance
- **→** Resists Contamination

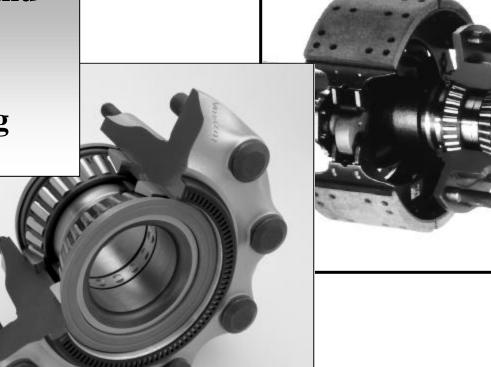


# **Unitized Wheel End Systems**

Integrated Hub Seal And Bearing

Sealed For Life

**◆ No Adjustment During**Installation

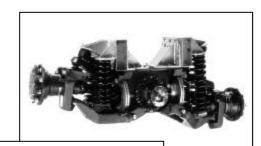


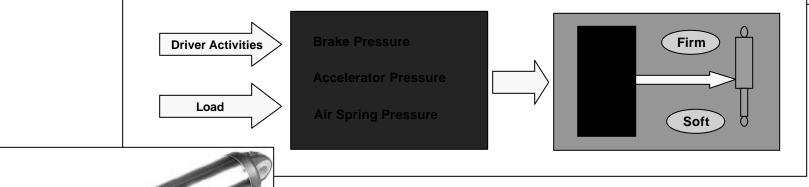
- ◆ Eliminates Too Tight/Loose Condition
- Permanently Lubricated
- Human Factor Eliminated



# **Semi-Active Independent Suspension**

Actively Controls Shock
Absorber Damping
Microprocessor Control
Load Compensation







Enhanced Ride And Mobility
Reduces Pitch And Roll
Actively Stabilizes Load



#### **Extended Life Brakes**

- Advanced Fiber Blended Bushing
- Increased Lining Volume
- Teflon Coated Steel Backed Cam Head Bushing



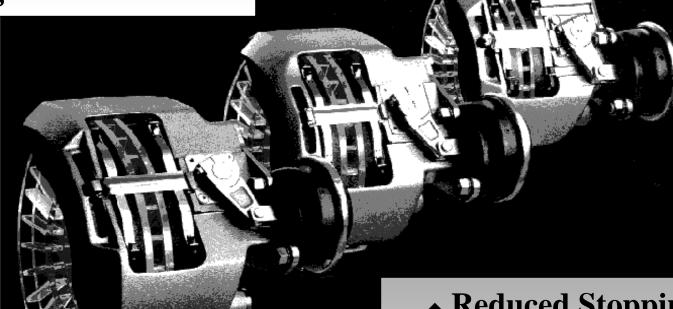
- Improves Deformation And Wear Resistance
- Longer Brake Shoe Life
- **◆ Eliminates Deformation**



#### **Advanced Air Disc Brakes**

- More Force Applied
- **◆ Less Heat Sensitive**

 One Step Replacement Process

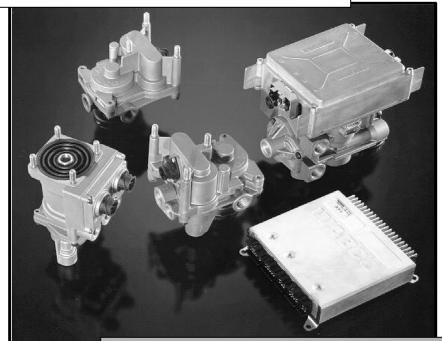


- Reduced Stopping Distance
- Reduced Brake Fade
- **◆ Easier To Service**



### **Electronic Braking Systems**

Pneumatic Logic Replaced By Electronics
Force Evenly Distributed
Applicable To Tractor And Trailer

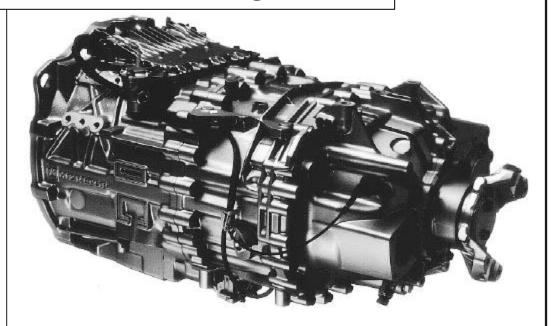


Faster Brake Response
Improved Brake Balance And Wear
Improved Combination Vehicle Control



#### **Freedom Transmissions**

Automated Mechanical
Electronic Shifting And Synchronization
No Clutch Pedal/No Shifting

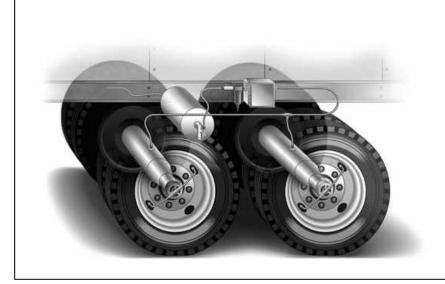


Minimal Driver Training
Improves Gear And Clutch Life
Reduced Driver Fatigue
Better Fuel Economy



#### **Automatic Tire Pressure Control**

Maintains Tire Pressure Compensates For Leaks OEM Or Retrofitable





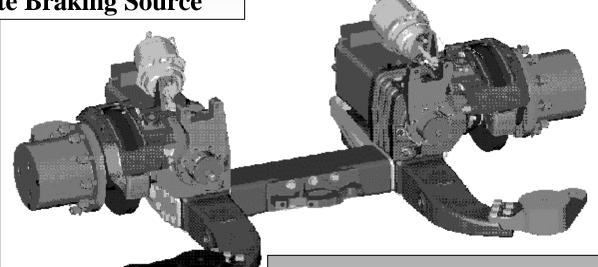
Longer Tire Life
Safe Reliable Operation
Ease Of Availability



# **Hybrid Vehicle Drive Systems**

- Electric Drive
- Quiet Operation

• Alternate Braking Source



- Fuel And Environmentally Efficient Through Regenerated Power
- More Stealth-Like
- Reduced Brake Wear



#### In Conclusion...

COMMERCIAL DESIGNS

SPECIALIZED MILITARY DESIGNS

**Complete Vehicle System Capability** 

Broad Product Spectrum For A Variety Of Mobility And Duty Severities

Commercial Concepts That Can Be Used For Military Application

LOWEST COST

MOST SEVERE DUTY CYCLE

**Optimize The Cost Durability Tradeoff**